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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Anticipated Classification
of this Application:

Attorney Docket No.: F-224

Class: 364

Date: October 31, 2000

Subclass:

Prior Application: 09/339,768

Group Art Unit: 3651

Examiner:

Title: **SYSTEM AND METHOD FOR COMMUNICATING A MESSAGE IN A MAILING
SYSTEM**

REQUEST FOR FILING A CONTINUATION-IN-PART APPLICATION
UNDER 37 CFR 1.53(b)

Assistant Commissioner for Patents
Box CPA
Washington, D.C. 20231

Sir:

This is a request for filing a continuation-in-part application under 37 CFR 1.53(b), of pending prior application serial number 09/339,768, filed on June 24, 1999, by Leon A. Pintsov, et al, for "System and Method for Employing Digital Postage Marks as Part of Value-Added Services in a Mailing System".

1. Enclosed are:

22 pages comprising the specification, claims, and abstract.

8 sheets of drawing.

A Declaration and Power of Attorney.

A Recordation of Assignment Request with attached copy of executed Assignment of the invention to Pitney Bowes Incorporated, 1 Elmcroft Road, Stamford, Connecticut 06926-0700.

Certificate of Express Mail.

Return Receipt Postcard.

2. Prior Application Serial Number 09/339,768 and the application filed herein under 37 C.F.R. §1.53(b) share at least one common inventor, Leon A. Pintsov.
3. Prior Application Serial No. 09/339,768 has not been abandoned or granted as of the filing date of this application under 37 C.F.R. §1.53(b).
4. The application filed herewith according to 37 C.F.R. §1.53(b) contains a specific reference to Application Serial No. 09/339,768.
5. The filing fee is calculated below:

**CLAIMS AS FILED IN THE PRIOR APPLICATION
LESS ANY CLAIMS CANCELED BY AMENDMENT**

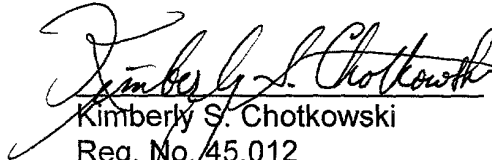
jc841 U.S. PTO
09/703231
10/31/00

Basic Fee							\$ 710.00
Claims Fee	Number Filed		Number Extra		Rate		
Total Claims	23	- 20 =	3	X	\$18.00	=	\$54.00
Independent Claims	4	- 3 =	1	X	\$80.00	=	\$80.00
Multiple Dependent Claims					\$270.00	=	\$0.00
Total Filing Fee							\$844.00

6. Please charge our Deposit Account Number **16-1885** in the amount of \$844.00 for the filing fee.
7. The Commissioner is hereby authorized to charge any fees which may be required or credit any overpayment to Account No. **16-1885**. A duplicate copy of this sheet is enclosed.
8. The prior application is assigned of record to **Pitney Bowes Inc.**
9. A newly assignment for the application filed herein under 37 C.F.R. §1.53(b) is being filed concurrently herewith.
10. Address all future communications to:

Pitney Bowes Inc.
Intellectual Property and Technology Law Department
35 Waterview Drive - Mail Location: 26-22
P.O. Box 3000
Shelton, CT 06484-8000

The undersigned declares further that all statements made herein of her own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so much are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.


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PITNEY BOWES INC.
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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:

Assistant Commissioner for Patents
Box CPA
Washington, D.C. 20231

on October 31, 2000
Date of Deposit

Kimberly S. Chotkowski
Name of Registered Rep.


Signature

October 31, 2000
Date

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:) Attorney Docket No.: F-224
Leon A. Pintsov) Group Art Unit:
Serial No.:) Examiner:
Filed: Concurrently herewith) Date: October 31, 2000
Title: **SYSTEM AND METHOD FOR COMMUNICATING A MESSAGE IN A
MAILING SYSTEM**

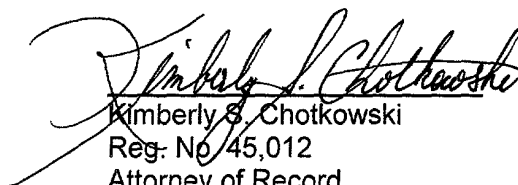
CERTIFICATE OF MAILING BY EXPRESS MAIL

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In accordance with the provisions of 37 CFR 1.10, I hereby certify that the attached Patent Application consisting of 22 pages and 8 sheets of drawings; Request for Filing a Continuation-in-Part Application Under 37 C.F.R. 1.53(b); Declaration; Recordation of Assignment w/ attached copy of executed Assignment (original + 1); and Return Receipt Postcard were deposited with the U.S. Postal Service for delivery by Express Mail on October 31, 2000,. The number of the Express Mail mailing label is EF041620905US.

Respectfully submitted,


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SYSTEM AND METHOD FOR COMMUNICATING A MESSAGE IN A MAILING SYSTEM

Cross Reference to Related Applications

This application is a continuation in part of co-pending application "System and Method for Employing Digital Postage Marks as Part of Value-Added Services in a Mailing System", filed June 24, 1999, and commonly assigned to the assignee of this application: US Patent Application Serial Number 09/339,768, which is specifically incorporated herein by reference.

Field of the Invention

The present invention relates generally to mailing systems and methods. More particularly, the present invention is directed to mailing systems and methods that evidence postage payment using digital postage marks.

Background of the Invention

The field of communication is one of the fastest growing sectors of the economy. Two basic modes of communication are electronic and hardcopy communications. Well known examples of electronic communication are e-mail (Internet), computer facsimile and digital telephony, while a classic example of hardcopy communication is traditional mail delivery. There are also mixed forms of communication combining hardcopy and electronic modes such as traditional facsimile and hybrid mail. Both electronic and hardcopy communications offer advantages and disadvantages to users. The electronic communications, while fast and economical, lack universal coverage of traditional mail

and create multiple security and legal concerns, particularly in sensitive transaction-type communications. The hardcopy mail is slower and more expensive, but it covers a vast majority of the population and offers legal proof that is frequently required in business and social endeavors.

5 Recently, in the United States of America and other countries, new digital methods of payment evidencing for traditional mail have been approved by respective posts. Specifically, Digital Postage Marks (DPM) (a.k.a. digital indicia, a.k.a. information-based indicia) are computerized information printed or otherwise attached to a mail item to provide an evidence of payment to a verification authority (e.g., the United States Postal Service). See for example, PERFORMANCE CRITERIA FOR INFORMATION-BASED INDICIA AND SECURITY ARCHITECTURE FOR OPEN IBI POSTAGE METERING SYSTEMS, dated April 26, 1999, which is a United States Postal Service specification that defines the requirements for a system which uses a general purpose computer for printing information-based indicia in a two-dimensional barcode. When the majority of the information in the DPM is presented in the form of a two-dimensional barcode (such as DataMatrix or PDF417), the DPM can carry a very substantial amount of information that can be automatically and economically computerized, printed and later scanned using conventional computer-driven scanners. The nature of this information has been application dependent and, typically, has been oriented toward security features for verification of payment evidence. This type of information, generally referred to as postal data, preferably includes identification of the metering device (or licensee) responsible for the payment, unique identification of mail item, value of various accounting registers, location of the mail deposit/mailler's account,

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postage value and other similar information. Such information is typically protected by a cryptographically generated validation code known as CPVC (Cryptographic Postage Validation Code). Another way to protect DPM is by supplying the verification authority with the value of the validation code (Postage validation Code or PVC) prior to mail submission as described in U.S. Patent No. 5,612,889, assigned to the assignee of this application.

One commonly recognized general purpose of sending a mail item is to solicit a reply message from a recipient or service provider. Such reply message may be a response to the message contained in the mail item. The reply message may also be a service type message relating to sending and/or delivering and/or receiving the mail item by either the mail recipient or the service provider, or both. The circumstance when confirmation of mail acceptance and/or delivery is required is particularly common and normally addressed by certified, registered or insured mail. These types of mail are traditionally organized around a physical proof of acceptance and delivery, such as a physical receipt, which is signed by the service provider's clerks and/or the mail recipient and physically delivered to the mail originator (mailer). The postal services incur considerable cost for such special services and value-added service, and the mailer is charged a fee that is significant in comparison to the cost of regular delivery of the mail item. For example, when a mailer requests a return receipt, the recipient of the mail signs a card stating that the mail has been received. This card is physically delivered back to the original mailer as acknowledgement of mail receipt from the recipient.

Therefore, typical physical proofs of acceptance and delivery are content limited, economically inefficient, and time-consuming. Furthermore, most, if not all, such methods require separate, essentially manual, handling of special services mail by the postal service which costs the postal service significantly more money than automated
5 mail processing based on machine readability of information present on mail items.

As of 1998, almost 20% of the population in USA and industrial world in general have access to electronic mail via Internet. Even a higher number of mailers use facsimile regularly. These numbers are expected to grow dramatically in the future. Although such electronic communications provide speed and efficiency over the
10 physical delivery of mail, there is no indication that such electronic communications will replace the physical delivery of mail. One solution to this problem disclosed in related Application Number 09/33,768 has been to provide e-mail response rather than a physical mail item response. However, these response messages may not allow the
15 recipient the ability to send a recipient signature image and a mail item image combined with a personalized communication to the originator. Such communication would typically require a separate, time-delayed transaction such as, for example, a return receipt mail piece, a separate e-mail message or a phone call or facsimile. Of course, those responses assume the recipient has knowledge of the original mailer's various addresses.

Summary of the Invention

In accordance with the present invention, the machine-readable DPM provides a means to overcome the aforementioned difficulties at least for a considerable portion of

mail stream. It has been found that the digital data in the DPM may include information that can be used for other than security and postage payment verification. For example, by including a mailer's e-mail address in the DPM, the present invention provides an opportunity to send an e-mail return receipt, which eliminates the need for a return receipt being physically delivered to the mailer. Thus, the postal service saves on the mail cost by adding this attribute to the DPM, and the savings can be passed along to the mailer.

The present invention realizes that the new digital methods of payment evidencing offer unprecedented opportunities not only to improve postal revenue collection and protection but also to create new user-friendly services that can greatly improve the appeal of traditional mail. Transition to digital methods of payment evidencing, in fact, offer an information-rich interface between mailers, posts and mail recipients that can substantially enhance advantages and features of traditional mail while simultaneously alleviating its disadvantages, such as its relatively high cost. Paradoxically, this information-rich interface can be achieved by integrating traditional hardcopy and electronic communication into one effective communication system that takes advantage of beneficial features of both media and offering end users (i.e. rate paying public) a broad selection of communication choices.

In accordance with the present invention, the DPM is treated as a message that may be used to facilitate the transfer of certain information between the mailer and the mail piece recipient. The DPM message is sent by a mailer to a service provider (carrier or post), mail item recipient and any third party interested in the information encoded in the DPM (such as, for example, a legal authority). In this regard, the DPM

message can support any specific application of communication.

The present invention provides the mailer with the ability to receive an image of a mail piece in addition to confirmation of receipt and provides the recipient, upon mail piece receipt, with the ability to submit a response to the original mailer at the time of receipt, in a secure manner. Although the original mailer may receive the return receipt information in an expedited manner, the original mailer does not have the capability to receive an image of the delivered mail piece. This invention integrates electronic communication information, such as an e-mail address or any other electronic address (for example, a facsimile number, separate e-mail address or pager number), into a conventional DPM, any other predetermine identifier, or the information may be printed directly on said mail piece in a predetermined location. The invention provides the creation and communication of messages between the mailer and the recipient. Messages, such as delivery confirmation or personal response messages, are communicated in a more expeditious and effective manner. Essentially, any information about a mail item known to the carrier may be forwarded to the mailer (or other intended recipient) through an alternate electronic communication channel. This concept can be extended to provide an image of the mail item or the actual communication message. In particular, an image of a mail item communication message can be included in an e-mail response to a special service request as an evidence of the nature of delivered message. These messages may be archived at the post office or a third party data center for future access. Through use of well-known security techniques, such as cryptography, the present invention deals effectively with issues of confidentiality,

message integrity, authentication and non-repudiation. These and other aspects of the present invention are covered in the detailed description of the invention.

In accordance with the present invention, a system and method is provided for sending a message to the mailer of a mail piece distributed in a postal system using information located at a predetermined location on a mail piece. The information includes the mailer's electronic address and may be located anywhere on the mail piece including the DPM. At delivery of the mailpiece into the recipient's hands, addressing information is captured from the mail piece, and a return message is created by the recipient and sent to the mailer in accordance with the captured address. Upon receipt of the mail piece, the recipient may also be required to sign for the mail piece. The physical signature and/or a copy of the mailpiece may be combined into the returned message.

Therefore, it is now apparent that the present invention substantially overcomes the disadvantages associated with the prior art. Additional advantages of the invention will be set forth in the description which follows, and in part will be obvious from the description, or may be learned by practice of the invention. The objects and advantages of the invention may be realized and obtained by means of the instrumentalities and combinations particularly pointed out in the appended claims.

Brief Description of the Drawings

The accompanying drawings, which are incorporated in and constitute a part of the specification, illustrate presently preferred embodiments of the invention, and together with the general description given above and the detailed description of the preferred embodiments given below, serve to explain the principles of the invention. As shown throughout the drawings, like reference numerals designate like or corresponding parts.

Fig. 1 is a schematic of a prior art PC metering system as an example of a mail generation subsystem that creates and prints a DPM in accordance with the present invention;

Fig. 2 is a block diagram of a postal distribution network in accordance with the present invention;

Fig. 3 is a block representation of a mail item file that is created and supplemented as the mail item is processed and delivered in accordance with the present invention;

Fig. 4 is a schematic of an optional delivery confirmation subsystem used by a recipient in accordance with the present invention;

Fig. 5 is a flow chart of the process of creating the mail item to be processed by the postal distribution network of Fig. 2;

Figs. 6A and B are flow charts of the processing of the mail item by the postal distribution network of Fig. 2.

Fig. 7 is an example of a mail item image returned to the original sender.

Detailed Description of the Preferred Embodiments

The present invention provides a system and method for integrating value-added services information into the DPM of a mail item to provide a more economical and efficient method of providing such value-added services. Although the present invention is described below as an e-mail implementation, it will be understood by those skilled in the art that a viable alternative includes substituting a mailer's pager number so that a pager notification of mail receipt can be used along with some other receipt data. Other viable alternatives include facsimile or automated voice response notification. Furthermore, the present invention is described for a mail item that is delivered by a postal service. It will be understood by those skilled in the art that the present invention can be used with any carrier that physically delivers any item. It will be further understood that for such other carriers, the communication information that is described herein as being integrated in the DPM may be applied in any manner to any part of the item being physically delivered. For example, the information may be part of a bar code or may be in plain text.

Furthermore, the present invention is described as having an e-mail address included in the DPM. However, it may be advantageous to include e-mail address information in the delivery address block of the mail piece, so that it can be captured and computerized during the basic mail processing step of automated mail sorting. For example, if a postal administration/carrier is not always concerned with verification of payment, it may choose to selectively scan DPM's based on some predetermined and adaptive sampling plan. On the other hand, special services, such as proof of deposit,

proof of delivery and proof of receipt, require that the e-mail address of the sender be known to the postal operator/carrier. Thus, it may be important to separate postage payment security data (normally included into the DPM) and other data (e.g., special service) and position these different types of data in the different places on the mail item optimized for specific mode of mail processing and operation employed by a given postal operator or carrier. The present invention specifically provides for all different arrangements of this kind. It is noted that the three services (proof of deposit, delivery and receipt) described above are very important types of services desired by mailers, but they are not the only ones allowed by the present invention and are described below as examples only.

Referring now to Fig. 1, a schematic of a prior art PC metering system, generally designated 10, is shown as an example of a mail generation system that creates and prints a DPM 12 on mail item 14 in accordance with the present invention. In accordance with the present invention, DPM 12 includes a two-dimensional bar code that contains conventional IBIP information and confirmation notification information, such as e-mail address, facsimile number, telephone number and/or pager number, and a mail item unique identification number. PC meter 10 includes conventional PC 16, display 18 and printer 10. See U.S. Patent No. 5,781,438, assigned to the assignee of this application, which is hereby incorporated by reference for a more detailed description of a PC metering system.

Referring now to Fig. 2, a block diagram of the system of the present invention is shown. The system includes a postal distribution network, generally designated 100, which processes a mail item 14 that originated from mailer's PC computer system 10

and delivers mail item 14 to a recipient 30 while capturing special services information in accordance with the present invention. The postal distribution network 100 includes conventional components such as: facer/canceler 110; MLOCR (multi-line optical character reader) sorters 120 that typically perform a primary sort for mail items that have not been presorted; intermediate bar-code sorters 130; postal transport means 140 for transporting the mail item from one postal facility to another; final bar code sorters 150; and delivery means 160, such as a mail carrier delivery to a mailbox. Delivery means 160 includes a scanner 162 for scanning DPM 12 at the time of delivery. In accordance with the present invention, postal distribution network 100 further includes a digital data capture computer 170 that is optionally coupled to one or more of the aforementioned components of the postal distribution network 100 for the purpose of capturing information, including special services information, that is read from the DPM of the mail item being processed. As information is captured by digital data capture computer 170, a mail item file 200 (described in detail below) is created. Depending on the special services being processed, digital data capture computer 170 communicates through a public electronic communications network 250 with mailer's computer system 10, recipient's computer 32, or a third party computer 300. Communications network 250 may be any conventional communications network, such as the Internet or a cellular/conventional telephonic network, or any combination thereof depending on the type of communication information read from the DPM.

Referring now to Fig. 3, a block representation is shown of mail item file 300 that is created and supplemented as mail item 14 is processed and delivered to recipient 30. Mail item file 300 includes: a header 305 of postal information that has been captured

from an initial read of the DPM; a mail item identification number 310, which has been read from the DPM or assigned within the postal distribution network 100; a list 318 of special services requested; and one or more e-mail addresses 320. For example, the special services may direct a communication to the mailer, the recipient, a third party repository or any other party. The present invention provides for one or more of such communications. Mail item file 300 further includes various data elements 320 that are optionally captured depending on the special services requested. Data elements 320 may include induction time 330 and induction address 332 indicating when and where mail item 14 enters the postal distribution network 100, intermediate times 340 and addresses 342 indicating various stages of processing within the postal distribution network 100, and delivery time 350 and delivery address 352 indicating when and where the mail item leaves the postal distribution network 100. Data elements 320 may further include information captured when the DPM 12 was read, such as a hash 360 of the contents of mail item 14 and a digital signature and/or certificate 370.

Referring now to Fig. 4, an optional delivery confirmation subsystem is shown in the form of recipient's computer 32. A hand-held scanner 34 is used by recipient 30 to read DPM 12. Recipient's computer 32 includes software, which obtains an appropriate e-mail address from DPM 12 and sends an e-mail response in accordance with information contained within DPM 12.

Referring now to Fig. 5, a process is shown for creating mail item 14 to be processed by the postal distribution network 100 in accordance with the present invention. Mail item 14 is created with a DPM mark that includes the mailer's e-mail address that will be used, for example, as confirmation or completion of special services

requested by the mailer. Additional e-mail addresses may be included for other parties that the mailer desires to receive notice of, for example, delivery. DPM generation and/or postage payment process involves a user-selectable option to include e-mail address in encrypted form within the DPM. At step 400, using mail creation software in PC 16, a mailer enters or selects delivery address information, return address information and payment information. At step 405, the mailer selects desired special services, rating information and confirmation notification information, such as e-mail address, facsimile number, telephone number and/or pager number. It will be understood that the e-mail address may be automatically retrieved when the special services are selected. It will also be understood that the fee associated with the selected special services will be accounted for accordingly. At step 410, a cryptographic postage validation code (CPVC) is computed, for example, using digital signature with appendix, or digital signature with message recovery, a hybrid digital signature or message authentication code or postage validation code. At step 415, DPM 12 (including meter ID, mail item ID, origination postal code, service indicator, rating parameters, delivery address information, date, postage value and CPVC) is formatted for printing in OCR/human readable format and two-dimensional bar code. At step 420, mail item 14 is printed by printer 20 with DPM 12. At step 425, mail item 14 is deposited into the postal distribution network 100.

Referring now to Figs. 6A and 6B, there is shown a flow chart of the processing of mail item 14 by postal distribution network 100. At step 500, the processing of mail item 14 begins with the scanning of DPM 12, which provides delivery information and special services information including mailer's e-mail address. A mail piece image may

also be obtained at step 500, or the image may be scanned in upon delivery. At step 505, a verification key is obtained from DPM 12 or an external database, and the CPVC is verified using digital signature with appendix, digital signature with message recovery, a hybrid digital signature or message authentication code or postage validation code.

5 At step 510, if the CPVC is not correct, then at step 590, mail item 14 is outsorted. If the CPVC is correct, then a check is made at step 515 to determine whether confirmation of special services has been requested. If not, then normal processing continues at step 580. If confirmation of special services has been requested, then at
10 step 520, mail item 14 is marked for special handling by the delivery mail carrier, and mail item 14 is sorted and transported for final sort and delivery. At step 525, when mail item 14 is delivered into a mailbox or handed to the recipient, the delivery mail carrier scans DPM 12 to obtain the confirmation notification address. Alternatively, or additionally, the recipient may scan DPM 12 to obtain the confirmation notification address for sending the notification or an additional related message. The method flow
15 proceeds from step 520 to step 530 where an image of the mailpiece is scanned, if the image was not scanned at step 500. The image may include either the entire mail item contents or only the mailpiece envelope. At step 540, the recipient is queried as to whether or not the recipient desires to provide a response to the originator of the mailpiece. If the answer to the query at step 540 is "no", then at step 550, the response
20 and mail piece image are combined into a message, the method continues to step 600 as described herein below.

If, however, at step 540, the recipient does decide to respond to the mailer, then the method progresses to step 570, where the recipient composes a response

message. The response may compose the message directly, on an electronic data collection device, or on a printed form which would be later scanned into the system for return delivery. At step 580, the recipient signs the electronic data collection device to create a digital image of his/her signature. Again, this may be completed on an electronic data collection device or on a print form which later will be scanned into the postal system for return delivery. At step 590, a message containing the scanned form, including the mail piece image, signature and response message, is created. At step 600, the message may be signed digitally, and at step 610, the signed message may be sent to a postal service file for archiving. At step 620, using the address obtained at step 525, the file is then sent to the originator of the mail piece, and the message response system ends at step 630.

Now turning to Fig. 7, there is shown an example of the mail item image 700 which may be created at method flow step 530 and returned to the original sender. The image includes, but is not limited to, a service indicator 710, date of print 720, date of signature 760, mail item serial no. 730, mail piece image 740, physical signature image 750, and response message 770, and digital certificate 780.

Many features of the embodiments disclosed herein represent design choices selected to exploit the inventive concept as implemented in a particular mailing system environment. However, those skilled in the art will recognize that various modifications can be made without departing from the spirit of the present invention. Therefore, the inventive concept in its broader aspects is not limited to the specific details of the preferred embodiments described above, but is defined by the appended claims and their equivalents.

What is Claimed is:

1. A method for communicating a message relating to the delivery of a mail piece within a mailing system, the method comprising the steps of:
 - a) creating a set of data relating to a request for a special service, said set of data including an electronic address;
 - b) evidencing said set of special service request data into a predetermined location on said mail piece;
 - c) capturing from said predetermined location on said mail piece said set of data relating to said request for special service;
 - d) performing said captured request for special service
 - e) creating a recipient response message, and
 - f) sending said message to said captured electronic address.
2. The method as claimed in claim 1 wherein said recipient response message further includes:
 - a) an image of said mailpiece;
 - b) a recipient response to a mailer; and
 - c) an image of a recipient signature.
3. The method as claimed in claim 1 further including the steps of:
 - a) creating a file including said recipient message; and
 - b) archiving said file.

4. The method as claimed in claim 1 wherein said electronic address is an e-mail address.
5. A method for responding to the distribution of a mail piece within a mailing system, the method comprising the steps of:
- a) creating a set of data relating to a request for a special service, said set of data including an electronic address;
 - b) incorporating said set of special service request data into a predetermined location on said mail piece;
 - c) obtaining from said predetermined location on said mail piece said set of data relating to said request for special service;
 - d) performing said obtained request for special service;
 - e) creating a message, said message including:
 - i) a set of mail piece data, said mail piece data including said set of data relating to said special service
 - iii) an image of said mail piece;
 - iv) an image of a recipient signature;
 - v) a message from said recipient; and
 - f) sending said message to said obtained electronic address.
6. The method as claimed in claimed 5 further including the steps of:
- a) creating a file including said message and a set of mail piece data;
- and

b) archiving said file.

7. The method as claimed in claim 5 wherein said predetermined location is a digital postmark.

8. The method as claimed in claim 5 wherein said electronic address is an e-mail address.

9. The method as claimed in claim 5 wherein said electronic address is a facsimile number.

10. The method as claimed in claim 5 wherein said special service request is an electronic confirmation of receipt.

11. The method as claimed in claim 5 wherein said special service request is an electronic communication.

12. A method for employing digital postage mark as part of special services in a mailing system comprising the steps of:

- a) creating a set of postal data required of postage payment evidencing of a mail piece;
- b) creating a set of special service data defining a special service for said mail piece, said set of special service data includes an electronic

address;

- c) creating a digital postmark including said set of postal data and said set of special service data;
- d) encrypting said encrypted digital postmark;
- e) printing said digital postmark on said mail piece
- f) processing said mail piece to obtain said digital postmark;
- g) determining said special service from said digital postmark;
- h) performing said special service;
- i) creating a message, said message including:
 - i) a set of mail piece data;
 - ii) said set of data relating to said special service;
 - iii) an image of said mail piece
 - iv) an image of a recipient signature;
 - v) a message from said recipient; and
- j) sending said message file to said obtained mailer address.

13. The method as claimed in claim 12 further including the steps of:

- a) decrypting said digital postmark; and
- b) determining mail piece validity by verifying said digital postmark.

14. The method as claimed in claim 12 further including creating a file including the steps of

- a) said message; and

15. The method as claimed in claim 12 wherein said electronic address is an e-mail address.

16. The method as claimed in claim 12 wherein said electronic address is a facsimile number.

17. The method as claimed in claim 12 wherein said special service is confirmation of receipt.

18. The method as claimed in claim 12 wherein said special service is a third party communication.

19. System for providing a message relating to the distribution of a mail piece within a mailing system comprising:

- a) means for determining, during said mail piece delivery, a set of information contained at a predetermined location on a mail piece, said set of information including an electronic address;
- b) means for creating a message; and
- c) means for sending said message to said electronic address.

20. A system as claimed in claim 19 wherein said mailer message includes a recipient response to said mailer.

21. A system as claimed in claim 19 wherein said mailer message includes an

image of said mail piece.

22. A system as claimed in claim 19 wherein said mailer message includes an image of a recipient signature.

23. The method as claimed in claim 19 further including a means for creating a message file and a means for archiving said message file.

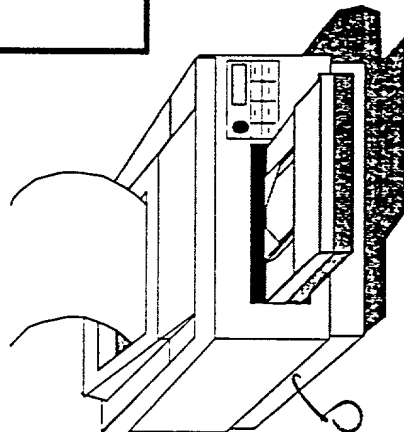
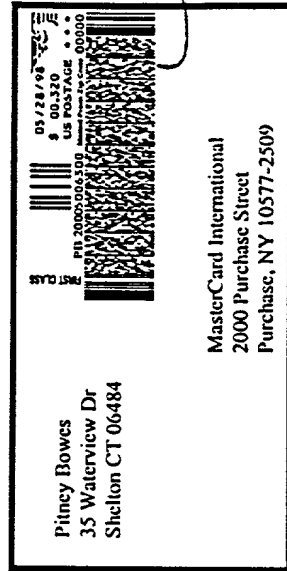
SYSTEM AND METHOD FOR COMMUNICATING A MESSAGE IN A MAILING SYSTEM

Abstract of the Invention

The present invention is directed to a system and method for providing
5 confirmation and messaging relating to the distribution of a mail piece within a mailing
system. Information including a mailer's address is included in a digital post mark or
printed directly on the mail piece. During delivery of the mail piece, the information is
read, and the mailer's address is captured. A message, which may include a mail piece
image, a recipient response and physical image of a recipient, is sent to the mailer in
10 accordance with read information.

to public electronic communication network

10



Printer

Computer

FIG 1

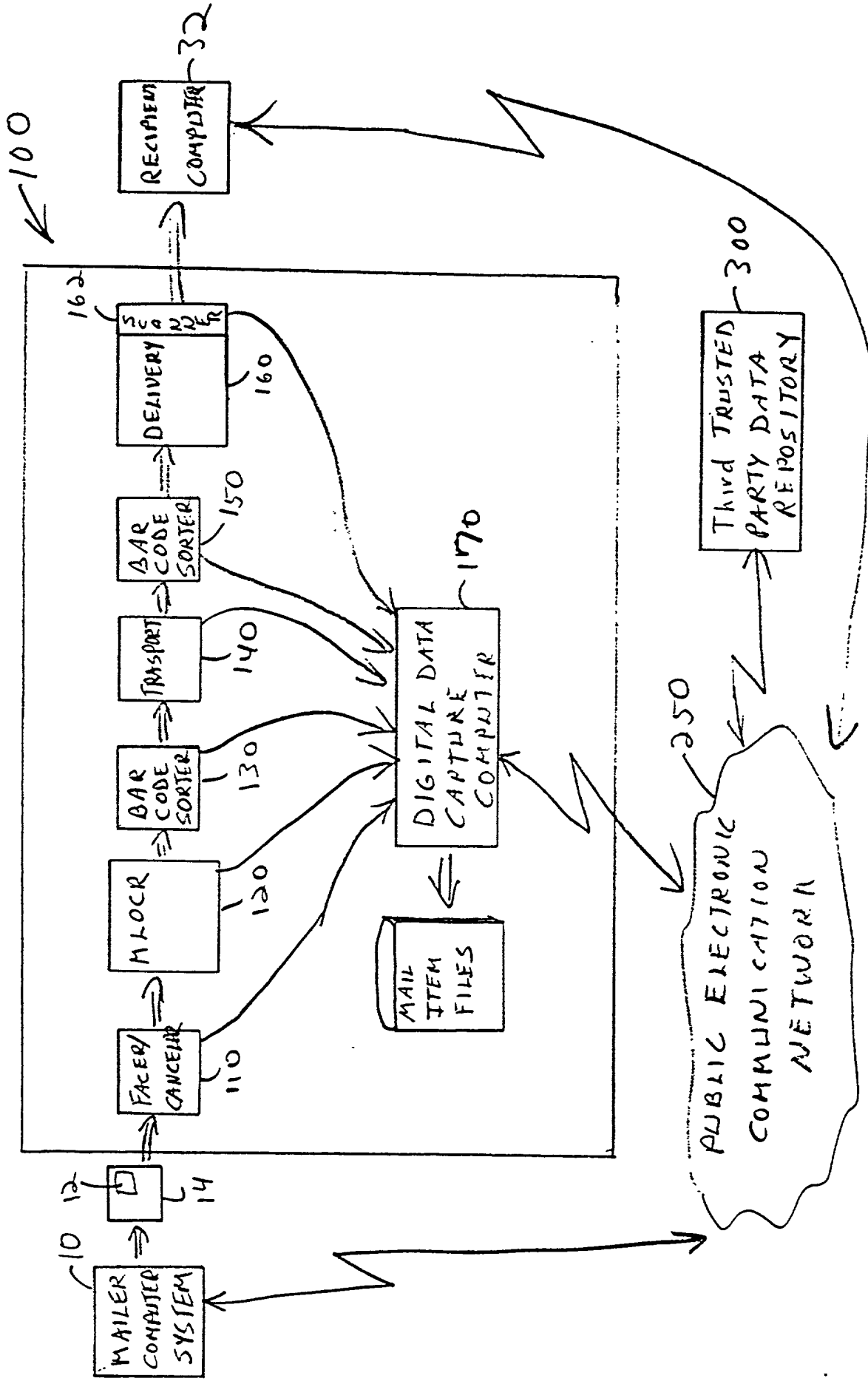


FIG. 2

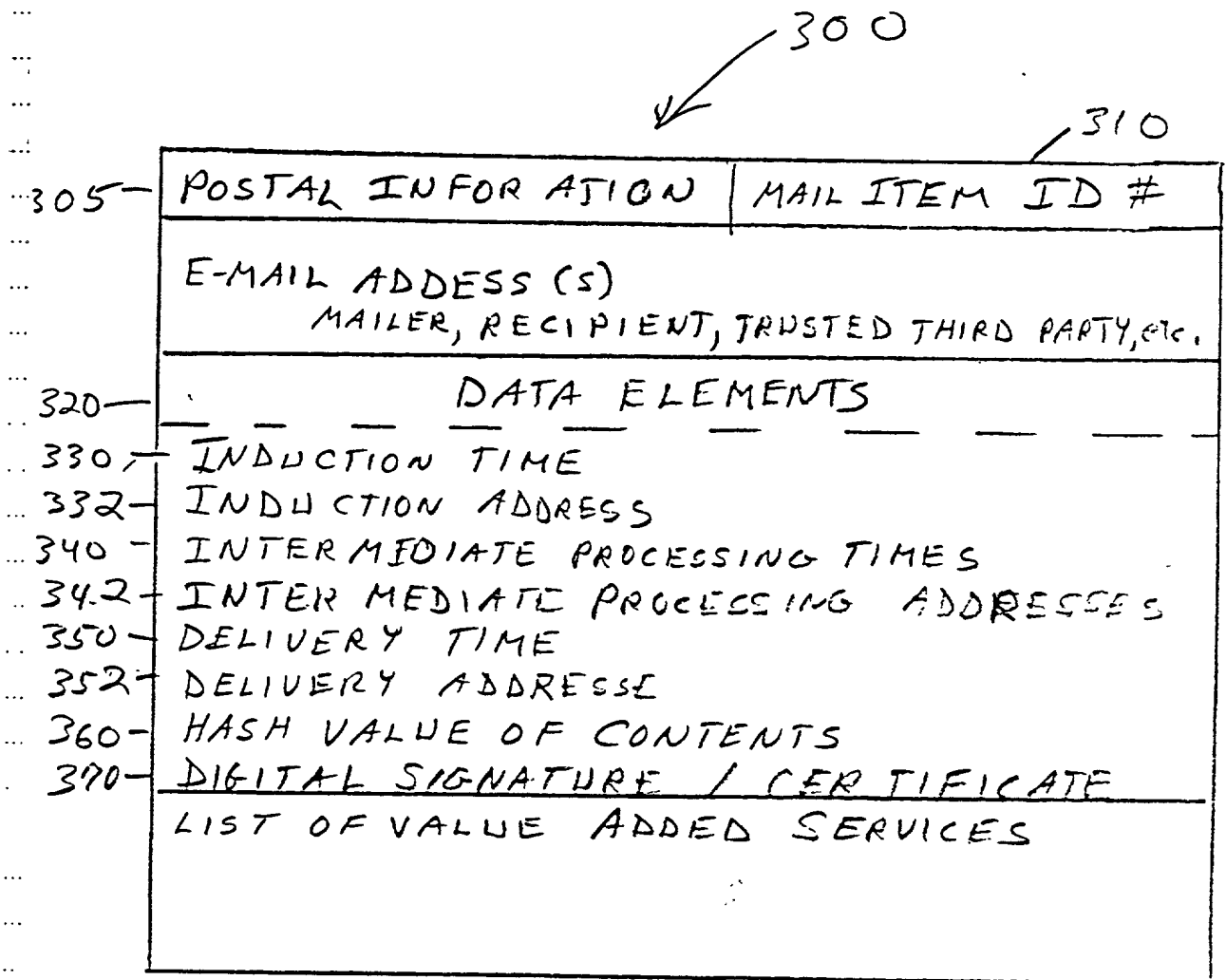


FIG 3

Variable	Mean	SD	Min	Max
Age	34.5	10.2	18	65
Gender	Male	10.5	0	20
Marital status	Married	15.2	0	30
Education	High school	12.8	0	25
Occupation	Unemployed	18.5	0	35
Income	Low	15.3	0	30
Health status	Good	12.1	0	25
Smoking	Non-smoker	10.8	0	20
Alcohol	Non-drinker	11.5	0	20
Exercise	Regular	13.2	0	25
Stress	Low	14.7	0	30
Sleep	Good	12.5	0	25
Appetite	Normal	11.9	0	20
Weight	Normal	13.8	0	25
Blood pressure	Normal	12.3	0	25
Blood sugar	Normal	11.7	0	20
Cholesterol	Normal	13.1	0	25
Heart rate	Normal	12.6	0	25
Respiratory	Normal	11.4	0	20
Neurological	Normal	13.5	0	25
Endocrine	Normal	12.0	0	25
Immunological	Normal	11.6	0	20
Genetic	Normal	13.3	0	25
Environmental	Normal	12.2	0	25
Social	Normal	11.8	0	20
Psychological	Normal	13.0	0	25
Behavioral	Normal	12.4	0	25
Emotional	Normal	11.5	0	20
Cognitive	Normal	13.2	0	25
Perceptual	Normal	12.1	0	25
Motor	Normal	11.9	0	20
Sensory	Normal	13.4	0	25
Intelectual	Normal	12.3	0	25
Artistic	Normal	11.7	0	20
Scientific	Normal	13.1	0	25
Humanistic	Normal	12.0	0	25
Technical	Normal	11.6	0	20
Mathematical	Normal	13.3	0	25
Language	Normal	12.2	0	25
Music	Normal	11.8	0	20
Dance	Normal	13.0	0	25
Theater	Normal	12.4	0	25
Visual arts	Normal	11.5	0	20
Literature	Normal	13.2	0	25
History	Normal	12.1	0	25
Geography	Normal	11.9	0	20
Science	Normal	13.4	0	25
Technology	Normal	12.3	0	25
Environment	Normal	11.7	0	20
Society	Normal	13.1	0	25
Culture	Normal	12.0	0	25
Religion	Normal	11.6	0	20
Philosophy	Normal	13.3	0	25
Law	Normal	12.2	0	25
Medicine	Normal	11.8	0	20
Engineering	Normal	13.0	0	25
Architecture	Normal	12.4	0	25
Design	Normal	11.5	0	20
Business	Normal	13.2	0	25
Management	Normal	12.1	0	25
Marketing	Normal	11.9	0	20
Finance	Normal	13.4	0	25
Accounting	Normal	12.3	0	25
Information technology	Normal	11.7	0	20
Computer science	Normal	13.1	0	25
Software engineering	Normal	12.0	0	25
Systems administration	Normal	11.6	0	20
Network engineering	Normal	13.3	0	25
Database administration	Normal	12.2	0	25
IT support	Normal	11.8	0	20
Quality assurance	Normal	13.0	0	25
Product management	Normal	12.4	0	25
Project management	Normal	11.5	0	20
Operations management	Normal	13.2	0	25
Supply chain management	Normal	12.1	0	25
Logistics management	Normal	11.9	0	20
Procurement management	Normal	13.4	0	25
Inventory management	Normal	12.3	0	25
Warehouse management	Normal	11.7	0	20
Transportation management	Normal	13.1	0	25
Customer service	Normal	12.0	0	25
Sales	Normal	11.6	0	20
Marketing research	Normal	13.3	0	25
Public relations	Normal	12.2	0	25
Media relations	Normal	11.8	0	20
Corporate communications	Normal	13.0	0	25



400

ENTER OR SELECT DELIVERY ADDRESS INFORMATION,
RETURN ADDRESS INFORMATION AND PAYMENT INFORMATION

F-224

FIG. 5
5 of 8

405

SELECT DESIRED VALUE-ADDED SERVICES, RATING INFORMATION
AND CONFIRMATION NOTIFICATION INFORMATION, SUCH AS E-MAIL ADDRESS,
FACSIMILE NUMBER, TELEPHONE NUMBER AND/OR PAGER NUMBER

410

COMPUTE CRYPTOGRAPHIC POSTAGE VALIDATION CODE (CPVC) USING DIGITAL
SIGNATURE WITH APPENDIX, OR DIGITAL SIGNATURE WITH MESSAGE RECOVERY,
A HYBRID DIGITAL SIGNATURE OR MESSAGE AUTHENTICATION CODE OR
POSTAGE VALIDATION CODE

415

FORMAT DIGITAL POSTAGE MARK INFORMATION (METER ID, MAIL ITEM ID,
ORIGINATION POSTAL CODE, SERVICE INDICATOR, RATING
PARAMETERS, DELIVERY ADDRESS IDENTIFIER DATE, POSTAGE VALUE, CIVC)
FOR PRINTING IN OCR/HUMAN READABLE FORMAT AND 2D BAR CODE

420

IMPRINT MAIL ITEM (OR LABEL) WITH DIGITAL POSTAGE MARK,
AND DEPOSIT/INDUCT MAIL ITEM INTO POSTAL PROCESSING SYSTEM

FIG 5

500

SCANNING OF DPM TO OBTAIN DELIVERY INFORMATION
AND VALUE-ADDED SERVICES INFORMATION INCLUDING MAILER'S E-MAIL ADDRESS

F-224

505

FIG. 6
6 of 8

OBTAIN VERIFICATION KEY FROM MAIL ITEM OR EXTERNAL DATA BASE AND VERIFY
CRYPTOGRAPHIC POSTAGE VALIDATION CODE (CPVC) USING DIGITAL
SIGNATURE WITH APPENDIX, OR DIGITAL SIGNATURE WITH MESSAGE
RECOVERY, A HYBRID DIGITAL SIGNATURE OR MESSAGE AUTHENTICATION CODE
OR CHECK PVC

510

IS CPVC CORRECT ?

515

IS THIS A SPECIAL CONFIRMATION SERVICE ITEM ?

520

MARK MAIL ITEM FOR SPECIAL HANDLING BY THE
DELIVERY MAILMAN AND MAIL ITEM IS SORTED AND
TRANSPORTED FOR FINAL SORT AND DELIVERY

525

590
OUTSORT MAIL ITEM
FOR EXCEPTION
PROCESSING

580
NORMAL PROCESSING

DELIVER INTO A MAILBOX OR HANDED TO
THE RECIPIENT, THE DELIVERY MAILMAN SCANS
DPM TO OBTAIN THE CONFIRMATION NOTIFICATION
ADDRESS

A

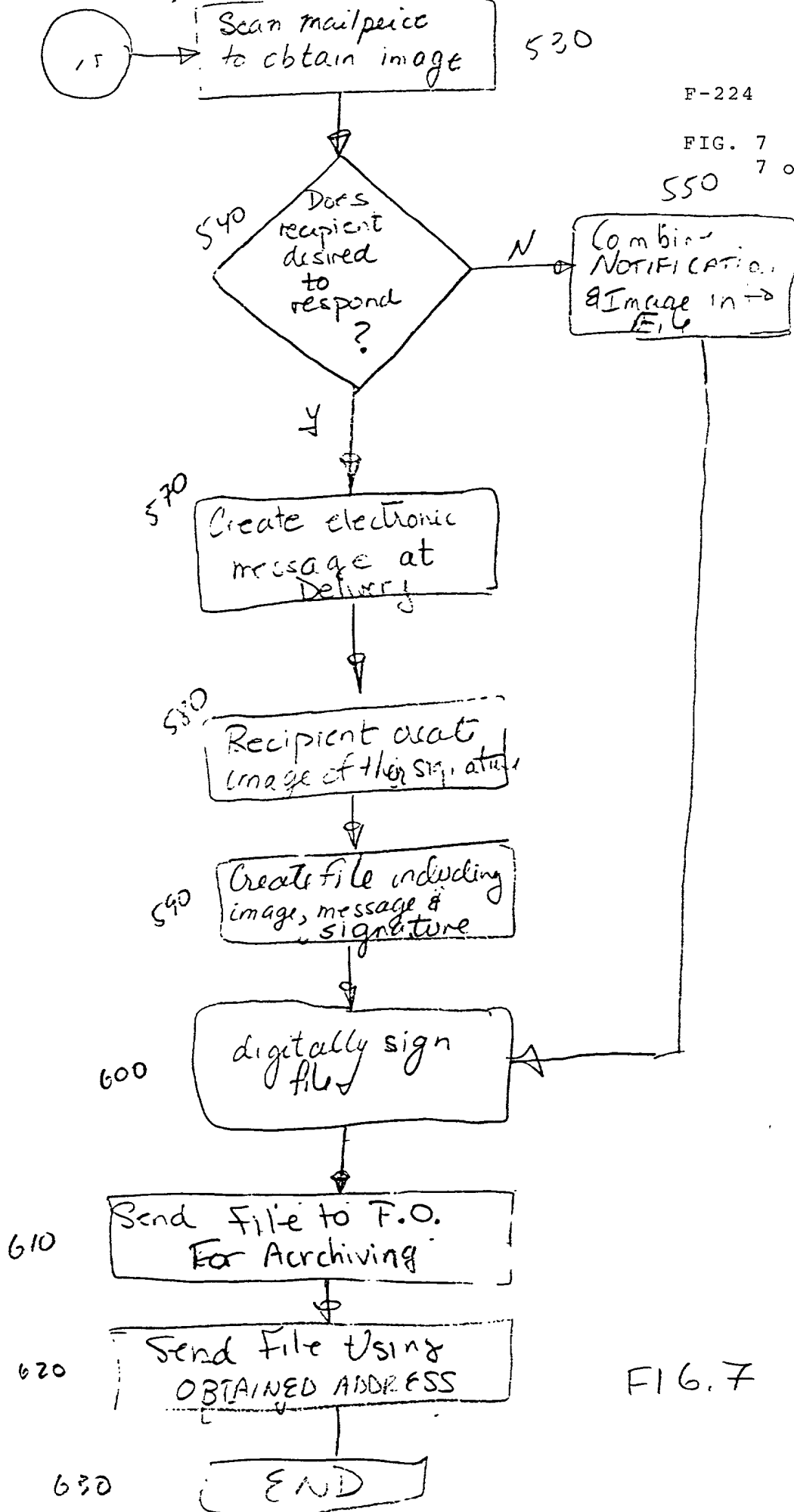





Image of the signed form	
<div>LA POSTE </div> <div>Certified Mail Receipt (Domestic Mail Only)</div>	
Date of print: 9/25/2000 3:29:24 PM	SN: 176 6908 8259 3940 4573
Image of Envelope	
<div><div>David K. Lee 1211 N. S. Vancouver, BC V6L 1G8</div><div><div>U.S. POSTAGE \$02.200 Sep 25 2000 P5 14 767-96 06484</div></div><div>David K. Lee 1211 N. S. Vancouver, BC V6L 1G8</div></div>	
Recipient's Signature:	<div>David K. Lee 9/25/00</div> <div>Date signed:</div>
To:	message
Digital signature of the signed form	
Date: 9/25/2000 3:31:04 PM	S/N: 3786 6396 5712 3205 3784
4644 8129 6970 1935 4454 9024 5813 3328 9008 1662 1492 8001 2357 2018 1717 5953 5124 6346 3345 9734 286 3842 4416 8350 1454 1795 8683 3665 3656 3249 2644 9313 6616 7154 5072 2101 538 1026 9045 5918 4385 6100 6480 8135 6660 4990 5164 8521 8690 1842 8284 639 405 4990 6457 5759 8619 2118 2266 9265 7813 7906 7284 9553	

FIG. 8

F-224

DECLARATION AND POWER OF ATTORNEYContinuation-In-Part
Patent Application

Attorney's Docket Number

F-224

Page 1 of 3

As below named inventor, I hereby declare that:

my residence, post office address and citizenship are as stated below next to my name;

I believe that I am the original, first and sole inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled

SYSTEM AND METHOD FOR COMMUNICATING A MESSAGE IN A MAILING SYSTEM

described and claimed in the attached specification;

This application in part discloses and claims subject matter disclosed in my earlier filed pending application, Serial Number 09/339,768, filed June 24, 1999;

I acknowledge my duty to disclose to the Patent and Trademark Office all information known to me to be material to the patentability of this application as defined in Title 37, Code of Federal Regulations, section 1.56; and

as to the subject matter of this application which is common to said earlier application, I do not know and do not believe the invention was ever known or used in the United States of America before my invention thereof, or patented or described in any printed publication in any country before my invention thereof or more than one year prior to said earlier application, that the invention was not in public use or on sale in the United States of America more than one year prior to said earlier application, that the invention has not been patented or made the subject of an inventor's certificate issued before the date of said earlier application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months prior to said earlier application, and that no application for patent or inventor's certificate on this invention has been filed in any country foreign to the United States of America prior to said earlier application by me or my legal representatives or assigns, except as follows:

DECLARATION AND POWER OF ATTORNEY

Continuation-In-Part

Patent Application

Attorney's Docket Number

F-224

Page 2 of 3

as to the subject matter of this application which is not common to said earlier application, I do not know and do not believe the invention was even known or used in the United States of America before my invention thereof, or patented or described in any printed publication in any country before my invention thereof or more than one year prior to this application, that the invention was not in public use or on sale in the United States of America more than one year prior to this application, that the invention has not been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months prior to this application, and that no application for patent or inventor's certificate on this invention has been filed in any country foreign to the United States of America prior to this application by me or my legal representatives or assigns.

I hereby appoint the following attorneys and/or agents to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith;

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

